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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,949	02/08/2000	Peen-Pau Cheng	DEEPF64.001C1	1934

20995 7590 03/29/2004

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
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2612

3

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/499,949

Applicant(s)

CHENG, PEEN-PAU

Examiner

LUONG T NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) 7-10, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 6, 7, 9, 12-14 are objected to because of the following informalities:

Claim 6 (Line 1), "where is" should be changed to --wherein--.

Claim 11 (Line 5), "said photic image" should be changed to --said photic image signal--.

Claim 12 (Line 5), "said photic image" should be changed to --said photic image signal--.

Claim 12 (Line 17), "where is" should be changed to --wherein--.

Claims 7, 9 are object as being dependent on claim 6.

Claims 13-14 are object as being dependent on claim 12.

Appropriate correction is required.

### *Double Patenting*

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

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3. Claims 1-14 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-14 of copending Application No. 09/473,175. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Application claims 1-14 are verbatim identical to copending Application claims 1-14

The Application and the copending Application recite the same limitation as follows:

Regarding Application Claim 1, the copending Application Claim 1 disclosed a photic image processing method comprising steps of:

(1) processing a photic image unit to generate a photic image signal having a plurality of basic image signals each of which represents a fundamental color (disclosed as **processing a photic image unit to generate a photic image signal having a plurality of basic image signals each of which represents a fundamental color**, copending Application Claim 1);

(2) performing a first regulating compensation to each of said basic image signals of said photic image to generate first compensated basic image signals (disclosed as **performing a first regulating compensation to each of said basic image signals of said photic image to generating first compensated basic image signals**, copending Application Claim 1);

(3) multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit (disclosed as **multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit by said photo image pick-up circuit**, copending Application Claim 1);

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(4) performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal (disclosed as **performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal, copending Application Claim 1).**

Regarding Application Claim 2, the copending Application Claim 2 discloses further includes steps of:

(1a) generating a light signal to an object for obtaining a reflective signal (disclosed as **generating a light signal to an object for obtaining a reflective signal, copending Application Claim 2);**

(1b) executing a photoelectric conversion in response to said reflective signal for obtaining said photic image signal having said plurality of basic image signals (disclosed as **executing a photoelectric conversion in response to said reflective signal for obtaining said photic image signal having said plurality of basic image signals, copending Application Claim 2).**

Regarding Application Claim 3, the copending Application Claim 3 includes a step of

(1 c) executing a current amplification for said photic image signal in order to enhance an anti-disturbance ability of said photic image signal (disclosed as **executing a current amplification for said photic image signal in order to enhance an anti-disturbance ability of said photic image signal, copending Application Claim 3).**

Regarding Application Claim 4, the copending Application Claim 4 discloses said step

(2) further includes steps of:

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(2a) eliminating a common-mode voltage of said photic image signal (disclosed as **eliminating a common-mode voltage of said photic image signal**, copending Application Claim 4);

(2b) regulating a DC voltage offset of said photic image signal (disclosed as **regulating a DC voltage offset of said photic image signal**, copending Application Claim 4);

(2c) amplifying and outputting said photic image signal whose said DC voltage offset is regulated (disclosed as **amplifying and outputting said photic image signal whose said DC voltage offset is regulated**, copending Application Claim 4);

(2d) performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image signal (disclosed as **performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image signal**, copending Application Claim 4).

Regarding Application Claim 5, the copending Application Claim 5 discloses the basic image signals of said photic image signal are respectively 3 basic signals indicative of red, green and blue fundamental colors (disclosed as **the basic image signals of said photic image signal are respectively 3 basic signals indicative of red, green and blue fundamental colors**, copending Application Claim 5).

Regarding Application Claim 6, the copending Application Claim 6 discloses executed by a photic image pick-up circuit including a lamp having a brightness, a lens and charge coupled device (CCD), (disclosed as **executed by a photic image pick-up circuit including a lamp having a brightness, a lens and charge coupled device (CCD)**, copending Application Claim 6).

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Regarding Application Claim 7, the copending Application Claim 7 discloses the first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit (disclosed as **the first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit, copending Application Claim 7).**

Regarding Application Claim 8, the copending Application Claim 8 discloses the step (3) further includes steps of:

(3a) equally dividing said period of time into three segments, and multiplexing said 3 basic signals of red, green and blue fundamental colors in said three segments to obtain a multiplexed photic image signal alternately containing therein said 3 basic signals (disclosed as **equally dividing said period of time into three segments, and multiplexing said 3 basic signals of red, green and blue fundamental colors in said three segments to obtain a multiplexed photic image signal alternately containing therein said 3 basic signals, copending Application Claim 8);**

(3b) outputting three compensation values at said three segments, each of said three compensation values compensating one of said 3 basic signals of red, green and blue fundamental colors at the corresponding segment in said multiplexed photic image signal (disclosed as **outputting three compensation values at said three segments, each of said three compensation values compensating one of said 3 basic signals of red, green and blue fundamental colors at the corresponding segment in said multiplexed photic image signal, copending Application Claim 8); and**

(3c) compensating said 3 basic signals of red, green and blue fundamental colors in said multiplexed photic image signal by multiplying respectively said three compensation values

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therefor to said second regulating compensation (disclosed as compensating said 3 basic signals of red, green and blue fundamental colors in said multiplexed photic image signal by multiplying respectively said three compensation values therefor to said second regulating compensation, copending Application Claim 8).

Regarding Application Claim 9, the copending Application Claim 9 discloses the second regulating compensation correlates and compensates a non-uniformity among said lamp's brightness, said lens, and said charge coupled device (CCD), (disclosed as said second regulating compensation correlates and compensates a non-uniformity among said lamp's brightness, said lens, and said charge coupled device (CCD), copending Application Claim 9).

Regarding Application Claim 10, the copending Application Claim 10 discloses the steps of:

(5) converting said second compensated multiplexed photic image signal into a digital photic image signal (disclosed as converting said second compensated multiplexed photic image signal into a digital photic image signal, copending Application Claim 10); and

(6) generating said control signal corresponding to said digital photic image signal (discloses as generating said control signal corresponding to said digital photic image signal, copending Application Claim 10).

Regarding Application Claim 11, the copending Application Claim 11 discloses photic image processing method comprising steps of:



(1) processing a photic image unit to generate a photic image signal having a plurality of basic image signals (disclosed as **processing a photic image unit to generate a photic image signal having a plurality of basic image signals**, copending Application Claim 11);

(2) performing a first regulating compensation to each of said basic image signals of said photic image to generate a first compensated basic image signals in order to equilibrate said basic image signals of said photic image signal (disclosed as **performing a first regulating compensation to each of said basic image signals of said photic image to generate a first compensated basic image signals in order to equilibrate said basic image signals of said photic image signal**, copending Application Claim 11);

(3) multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit (disclosed as **multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit**, copending Application Claim 11); and

(4) performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal, disclosed as **performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal**, copending Application Claim 11);

(5) converting said second compensated multiplexed photic image signal into a digital photic image signal, disclosed as **converting said second compensated multiplexed photic image signal into a digital photic image signal**, copending Application Claim 11); and

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(6) generating a control signal (disclosed as **generating a control signal**, copending Application Claim 11);

wherein said step (2) further includes steps of

(2a) eliminating a common-mode voltage of said photic image signal (disclosed as **eliminating a common-mode voltage of said photic image signal**, copending Application Claim 11);

(2b) regulating a DC voltage offset of said photic image signal (disclosed as **regulating a DC voltage offset of said photic image signal**, copending Application Claim 11);

(2c) amplifying and outputting said photic image signal whose said DC voltage offset is regulated (disclosed as **amplifying and outputting said photic image signal whose said DC voltage offset is regulated**, copending Application Claim 11); and

(2d) performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image signal (disclosed as **performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image signal**, copending Application Claim 11).

Regarding Application Claim 12, the copending Application Claim 12 discloses a photic image processing method comprising steps of:

(1) processing a photic image unit to generate a photic image signal having a plurality of basic image signals (disclosed as **processing a photic image unit to generate a photic image signal having a plurality of basic image signals**, copending Application Claim 12);

(2) performing a first regulating compensation to each of said basic image signals of said photic image to generate a first compensated basic image signals in order to equilibrate said

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basic image signals of said photic image signal (disclosed as performing a first regulating compensation to each of said basic image signals of said photic image to generate a first compensated basic image signals in order to equilibrate said basic image signals of said photic image signal, copending Application Claim 12);

(3) multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit (disclosed as multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit, copending Application Claim 12);

(4) performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal (disclosed as performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal, copending Application Claim 12);

wherein said basic image signals of said photic image signal are respectively 3 basic signals indicative of red, green and blue fundamental colors, where is executed by a photic image pick-up circuit including a lamp having a brightness, a lens and charge coupled device (CCD), and wherein said first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit (disclosed as wherein said basic image signals of said photic image signal are respectively 3 basic signals indicative of red, green and blue fundamental colors, where is executed by a photic image pick-up circuit including a lamp having a brightness, a lens and charge coupled device

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(CCD), and wherein said first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit, copending Application Claim 12).

Regarding Application Claim 13, the copending Application Claim 13 discloses the step (3) further includes steps of:

(3a) equally dividing said period of time into three segments, and multiplexing said 3 basic signals of red, green and blue fundamental colors in said three segments to obtain a multiplexed photic image signal alternately containing therein said 3 basic signals (disclosed as equally dividing said period of time into three segments, and multiplexing said 3 basic signals of red, green and blue fundamental colors in said three segments to obtain a multiplexed photic image signal alternately containing therein said 3 basic signals, copending Application Claim 13);

(3b) outputting three compensation values at said three segments, each of said three compensation values compensating one of said 3 basic signals of red, green and blue fundamental colors at the corresponding segment in said multiplexed photic image signal (disclosed as outputting three compensation values at said three segments, each of said three compensation values compensating one of said 3 basic signals of red, green and blue fundamental colors at the corresponding segment in said multiplexed photic image signal, copending Application Claim 13); and

(3c) compensating said 3 basic signals of red, green and blue fundamental colors in said multiplexed photic image signal by multiplying respectively said three compensation values therefor to accomplish said second regulating compensation (disclosed as compensating said 3 basic signals of red, green and blue fundamental colors in said multiplexed photic image signal by multiplying

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respectively said three compensation values therefor to accomplish said second regulating compensation, copending Application Claim 13).

Regarding Application Claim 14, the copending Application Claim 14 discloses the second regulating compensation correlates and compensates a non-uniformity among said lamp's brightness, said lens, and said charge coupled device (CCD), (disclosed as said second regulating compensation correlates and compensates a non-uniformity among said lamp's brightness, said lens, and said charge coupled device (CCD)).

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4-5, respectively, of U.S. Patent No. 6,052,147. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons discussed below.

Regarding Application Claim 1, the Patent Claim 1 disclosed a photic image processing method comprising steps of:

(1) processing a photic image unit to generate a photic image signal having a plurality of basic image signals each of which represents a fundamental color (disclosed as **a photo image pick-up circuit generating a photic image signal having a plurality of basic image signals representing fundamental colors**, Patent Claim 1);

(2) performing a first regulating compensation to each of said basic image signals of said photic image to generate first compensated basic image signals (disclosed as **performing a first regulating compensation to each of said basic image signals of said photic image, and generating first compensated basic image signals**, Patent Claim 1);

(3) multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit (disclosed as **multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit by said photo image pick-up circuit**, Patent Claim 1);

(4) performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal (disclosed as **performing a second regulating compensation for said multiplexed photic image signal, and outputting a second compensated multiplexed photic image signal**, Patent Claim 1).

Regarding Application Claim 2, Patent Claim 2 discloses further includes steps of:

(1a) generating a light signal to an object for obtaining a reflective signal (disclosed as **generating a light signal to an object for obtaining a reflective signal, Patent Claim 2**);

(1b) executing a photoelectric conversion in response to said reflective signal for obtaining said photic image signal having said plurality of basic image signals (disclosed as **executing a photoelectric conversion in response to said reflective signal for obtaining said photic image input signal having said plurality of basic image signals, Patent Claim 2**).

Regarding Application Claim 3, Patent Claim 4 includes a step of

(1 c) executing a current amplification for said photic image signal in order to enhance an anti-disturbance ability of said photic image signal (disclosed as **executing a current amplification for said photic image input signal generated and outputted from said charge coupled device, in order to enhance an anti-disturbance/ability of said photic image signal, Patent Claim 4**).

Regarding Application Claim 4, Patent Claim 5 discloses said step (2) further includes steps of:

(2a) eliminating a common-mode voltage of said photic image signal (disclosed as **eliminating a common-mode voltage of said photic image input signal, Patent Claim 5**);

(2b) regulating a DC voltage offset of said photic image signal (disclosed as **regulating a DC voltage offset of said photic image input signal, Patent Claim 5**);

(2c) amplifying and outputting said photic image signal whose said DC voltage offset is regulated (disclosed as **amplifying and outputting said photic image input signal whose said DC voltage offset is processed by said voltage regulator, Patent Claim 5**);

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(2d) performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image signal (disclosed as performing said first regulating compensation in response to said control signal, in order to equilibrate said basic image signals of said photic image input signal, Patent Claim 5).

6. Claim 5 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5 of U.S. Patent No. 6,052,147 in view of Imaide et al. (U. S. Patent No. 4,959,727).

Regarding Application Claim 5, the Patent Claim 5 of U. S. Patent No. 6,052,147, which includes all the limitation in Patent Claim 1 of U. S. Patent No. 6,052,147, does not disclose the basic image signals of said photic image signal are respectively 3 basic signals indicative of red, green and blue fundamental colors. However, Imaide et al. discloses the three primary color signals red, green, blue are readout from the combination of image sensor 2, pre-amplifier 3 and matrix 4 (Figure 1, Column 4, Lines 55-67). Therefore, it would have been obvious to have red, green, blue color as components of the image signal in order to obtain a quality color image.

7. Claim 6 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5 of U.S. Patent No. 6,052,147 in view of Imaide et al. (U. S. Patent No. 4,959,727) further in view of Nagano (U. S. Patent No. 5,166,811).

Regarding Application Claim 6, the combination of the Patent Claim 5 of U. S. Patent No. 6,052,147 and Imaide et al. fail to specifically disclose executed by a photic image pick-up circuit including a lamp having a brightness, a lens and charge coupled device (CCD). However,



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Nagano discloses an image data processing apparatus, which includes lamp 11, lens 24 and CCD 12 (Figures 1, 2, Column 4, Lines 34-51). Therefore, it would have been obvious to modify the device as claimed in the combination of the Patent Claim 5 of U. S. Patent No. 6,052,147 and Imaide et al. by the teaching of Nagano in order to provide an image data processing apparatus which is capable of crispy outputting a dark potion included on an original (Column 2, Lines 15-18).

8. Claim 11 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5 of U.S. Patent No. 6,052,147 in view of Mangelsdorf et al. (U. S. Patent No. 5,736,866).

Regarding Application Claim 11, the Patent Claim 5, which includes all the limitation of Patent Claims 1, 5, discloses a photic image processing method comprising steps of:

(1) processing a photic image unit to generate a photic image signal having a plurality of basic image signals (disclosed a photo image pick-up circuit generating a photic image signal having a plurality of basic image signals representing fundamental colors, Patent Claim 1);

(2) performing a first regulating compensation to each of said basic image signals of said photic image to generate a first compensated basic image signals in order to equilibrate said basic image signals of said photic image signal (disclosed as performing a first regulating compensation to each of said basic image signals of said photic image, and generating first compensated basic image signals (Patent Claim 1) in order to equilibrate said basic image signals of said photic image input signal, Paten Claim 5);

(3) multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit (disclosed as **multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit by said photo image pick-up circuit, Patent Claim 1**); and

(4) performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal, disclosed as **performing a second regulating compensation for said multiplexed photic image signal, and outputting a second compensated multiplexed photic image signal, Patent Claim 1**);  
wherein said step (2) further includes steps of

(2a) eliminating a common-mode voltage of said photic image signal (disclosed as **eliminating a common-mode voltage of said photic image input signal, Patent Claim 5**);

(2b) regulating a DC voltage offset of said photic image signal (disclosed as **regulating a DC voltage offset of said photic image input signal, Patent Claim 5**);

(2c) amplifying and outputting said photic image signal whose said DC voltage offset is regulated (disclosed as **amplifying and outputting said photic image input signal whose said DC voltage offset is processed by said voltage regulator, Patent Claim 5**); and

(2d) performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image signal (disclosed as **performing said first regulating compensation in response to a control signal, in order to equilibrate said basic image signals of said photic image input signal, Patent Claim 5**).

The Patent Claim 5, which includes all the limitation of Patent Claims 1, 5, fails to specifically disclose converting said second compensated multiplexed photic image signal into a digital photic image signal; and generating a control signal. However, Mangelsdorf et al. discloses that the signal output from programmable amplifier PGA 30 is sent to analog-to-digital convert ADC 30 (Figures 10, 13), and a control signal is sent to black level correction circuit 77 (Figure 13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device as claimed in Patent Claim 5 by the teaching of Mangelsdorf et al. in order to convert analog signal to digital signal for using in digital processing image signal.

9. Claim 12 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8, 12, 13 of U.S. Patent No. 6,052,147 in view of Nagano (U. S. Patent No. 5,166,811).

Regarding Application Claim 12, The Patent Claim 13 of U. S. Patent No. 6,052,147, which includes all the limitations in Patent Claims 1, 8, 12, 13, discloses a photic image processing method comprising steps of:

(1) processing a photic image unit to generate a photic image signal having a plurality of basic image signals (disclosed a photo image pick-up circuit generating a photic image signal having a plurality of basic image signals representing fundamental colors, Patent Claim 1);

(2) performing a first regulating compensation to each of said basic image signals of said photic image to generate a first compensated basic image signals in order to equilibrate said basic image signals of said photic image signal (disclosed as performing a first regulating

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compensation to each of said basic image signals of said photic image, and generating first compensated basic image signals (Patent Claim 1), and equilibrates said photic image signals, Patent Claim 13);

(3) multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit (disclosed as multiplexing said first compensated basic image signals in a period of time to generate a multiplexed photic image signal having said compensated basic image signals in series in said period of time, wherein said period is equal to a time of processing a photic image unit by said photo image pick-up circuit, Patent Claim 1); and

(4) performing a second regulating compensation for said multiplexed photic image signal to generate a second compensated multiplexed photic image signal, disclosed as performing a second regulating compensation for said multiplexed photic image signal, and outputting a second compensated multiplexed photic image signal, Patent Claim 1);

wherein said basic image signals of said photic image signal are respectively 3 basic signals indicative of red, green and blue fundamental colors (disclosed as said basic image signals of said photic image signal are 3 basic signals indicative of red, green and blue fundamental colors, Patent Claim 12),

and wherein said first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit (disclosed as said first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit, Patent Claim 13).

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The Patent Claim 13, which includes all the limitations in Patent Claims 1, 8, 12, 13, fails to specifically disclose executed by a photic image pick-up circuit including a lamp having a brightness, a lens and charge coupled device (CCD). However, Nagano discloses an image data processing apparatus, which includes lamp 11, lens 24 and CCD 12 (Figures 1, 2, Column 4, Lines 34-51). Therefore, it would have been obvious to modify the device as claimed in the Patent Claim 13 of U. S. Patent No. 6,052,147 by the teaching of Nagano in order to provide an image data processing apparatus which is capable of crispy outputting a dark potion included on an original (Column 2, Lines 15-18).

***Allowable Subject Matter***

10. Claims 7-10, 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 7 is considered allowable over the prior art of the record since the prior art of the record fails to show or fairly suggest a photic image processing method comprising the first regulating compensation regulates and equilibrates said photic image signals of red, green and blue fundamental colors and compensates a lamp aging phenomenon of said photic image pick-up circuit.

Claims 8 and 13 considered allowable over the prior art of the record since the prior art of the record fails to show or fairly suggest a photic image processing method comprising the steps

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of equally dividing said period of time into three segments, and multiplexing said 3 basic signals of red, green and blue fundamental colors in said three segments to obtain a multiplexed photic image signal alternately containing therein said 3 basic signals; outputting three compensation values at said three segments, each of said three compensation values compensating one of said 3 basic signals of red, green and blue fundamental colors at the corresponding segment in said multiplexed photic image signal; compensating said 3 basic signals of red, green and blue fundamental colors in said multiplexed photic image signal by multiplying respectively said three compensation values therefor to said second regulating compensation.

Claim 9, is considered allowable over the prior art of the record since the prior art of the record fails to show or fairly suggest a photic image processing method comprising the second regulating compensation correlates and compensates a non-uniformity among said lamp's brightness, said lens, and said charge coupled device (CCD).

Claim 10 is allowable for the reason given respect to claim 8.

Claim 14 is allowable for the reason given respect to claim 13.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto et al. (U. S. Patent No. 5,438,367) discloses still video camera and device for adjusting control data for amount of strobe emission.

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Shimaya et al. (U. S. Patent No. 5,579,049) discloses apparatus and method for controlling exposure by shutter speed control and/or gain control.

Liang et al. (U. S. Patent No. 5,781,233) discloses MOSFET camera chip and methods of manufacture and operation thereof.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T NGUYEN whose telephone number is (703) 308-9297. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN

3/21/2004



**LUONG T. NGUYEN**  
**PATENT EXAMINER**